

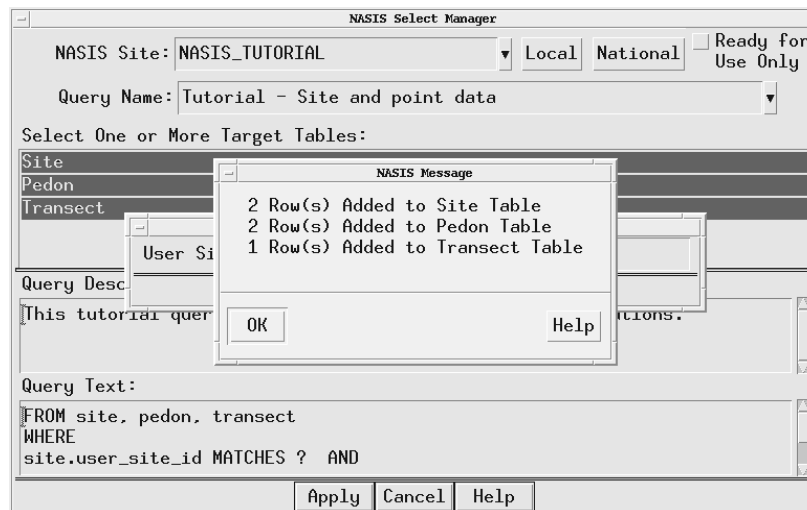
Chapter 19 Managing the Site and Point Data

This lesson begins with a transect that currently has two associated sites. The lesson describes the process of defining a new site, adding a pedon to the site, linking the site to a mapunit, and associating the new site to the two sites and to the transect.

Viewing the Existing Transect

The tutorial database contains two sites. You are going to add another site and pedon. In NASIS 4.1, each of the sites represented a transect stop; you grouped them in a Site Association to define the full transect. In NASIS 5.0 the organization of sites, pedons, transects, and site associations changed. Transects are a specialized grouping. Transect stops are now defined in the Pedon table and are linked to site observations for specific dates. The Transect table and Transect Text table describe only the transect, not the transect stops associated with transect. Associations are made in the Pedon table and described later.

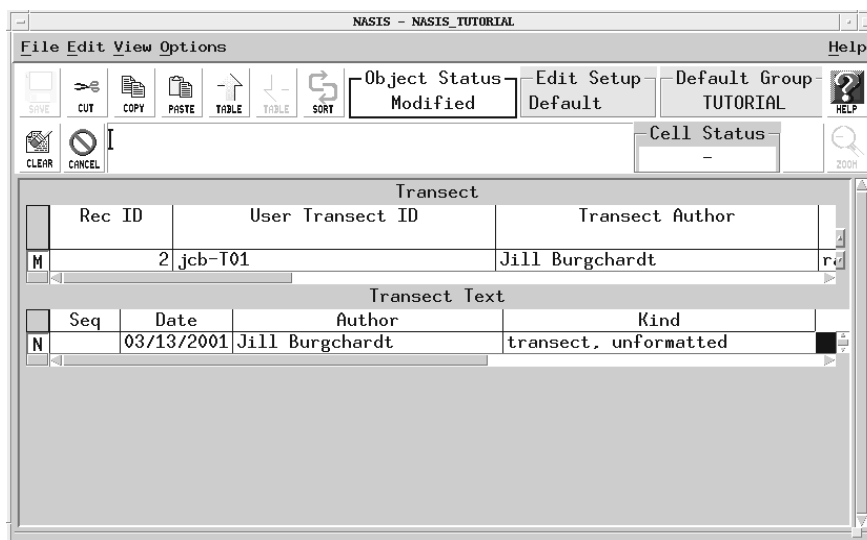
1. If you are continuing from Chapter 18, skip to step 6.
2. On the **File** menu, choose **New**. If you receive a message that data has been modified, click **OK**.
3. On the **File** menu, choose **Select**, then select the **Tutorial – Site and point data** query from the Query name list.
4. Highlight the site, pedon, and transect tables in the target table list. Click **Apply**.
5. In the Query Parameters box, type * in the **User Site ID** matches box, and click **Apply**.



Note: The message box will indicate that two rows were added to the Site table, two rows were added to the Pedon table, and one row was added to the Transect

table. Click **OK** to close the message box, then click **Cancel** to close the parameters dialog and **Cancel** again to close the Select Manager dialog.

- On the **View** Menu, click **Transects**, then **Transect Text**.



Note: Both the Transect and Transect Text tables are displayed.

- With the cursor positioned in the Transect table scroll to the right. Observe that association detail is not located here.

Defining a New Site

Note: In NASIS, you must first enter a site if one does not already exist that you wish to use. You then record a site observation record that includes the date of the observation. A pedon record can then be created in the Pedon table. You are required to link the pedon record to a site and a site observation record.

- View** menu, click **Sites**, then click **Site**.
- Click **F8** to create a new row.
- Tab to the **User Site ID**, type **jcb-98-003**.

	Rec ID	User Site ID	Lat. Degrees	Lat. Minutes	Lat. Seconds	Lat. Direction
N	15	jcb-98-003				
-	3	jcb-98-001	40	33	15.00	north
-	13	jcb-98-002	40	33	20.00	north

Note: The columns on the site screen request information found on the Pedon 232 form. If you prefer, you may enter a typical user site ID that would be used on your project. However, all of the screen examples and instructions will use the jcb-98-003 ID.

4. Tab across the screen entering physical location characteristics, such as latitude and longitude, and public land survey information. Use similar values to those shown for jcb-98-001 and jcb-98-002. Not all columns need to be completed.
5. After completing site characteristics (with your cursor still in the new row), click **View, Site Observations, Site Observation**.

	Seq	Observation Date	Observation Date Kind	Air Photo ID	Surface Water Kind	Surface Water
N	15	jcb-98-003				

Note: You must select the Site Observation table from the menu, because a previous lesson changed your default table path.

- Click **F8** to open a row on the Site Observation table, then tab to the Observation Date field.

Note: The Observation Date defaults to the current date.

- Enter **9/1/1998** in the Observation Date. Tab to the **Observation Date Kind** field.

Note: It is not necessary to enter leading zeros before the month and day (09 or 01), however, the full year (1998) must be entered.

- Click the **Choice** button, highlight **actual site observation date**, then click **Apply**.

- Tab across the row, entering data for values as appropriate.
Note: Before leaving the Site Observation table, scroll to the far right and notice the Rec ID of your new observation. If there are multiple observations on a single date, the Rec ID number can help you select a specific observation from a choice list later.
- Click the **Down Table** button to view the Site Soil Moisture table.
- Press **F8** to open a row, then complete the **Top Depth**, **Bottom Depth**, and **Moisture Status** as shown in the next figure.

Note: A single site may have several observations and each observation may have multiple entries in its Site Soil Moisture table and other child tables. You must press F8 to open each new row that you add.

The screenshot shows the NASIS - NASIS_TUTORIAL application window. The menu bar includes File, Edit, View, Options, and Help. The toolbar contains icons for Save, Cut, Copy, Paste, Table, Sort, Object Status (Modified), Edit Setup (Default), Default Group (TUTORIAL), Cell Status, and a Help icon. The main area displays three tables:

Site						
Rec ID	User Site ID	Lat. Degrees	Lat. Minutes	Lat. Seconds	Lat. Direction	
N 15	jcb-98-003					

Site Observation					
Seq	Observation Date	Observation Date Kind	Air Photo ID	Surface Water Kind	Surface Water
N	09/22/1998	actual site observation date			

Site Soil Moisture							
Seq	Top Depth	Bottom Depth	Observed Moisture State	Vol Moisture %	Moisture Tension	Rec ID	
N	0	40	dry			7	
N	40	65	moist			8	
N	65	200	wet			9	

Note: The Site object contains several other tables, which might need to be edited for an actual situation. On the **View** menu, click **Sites**, then click **Site**, and review the other tables.

Establishing a Site Area Overlap

1. On the **View** menu, select **Site**, then click **Site Area Overlap**.

The screenshot shows the NASIS - NASIS_TUTORIAL application window. The menu bar includes File, Edit, View, Options, and Help. The toolbar contains icons for Save, Cut, Copy, Paste, Table, Sort, Object Status (Modified), Edit Setup (Default), Default Group (TUTORIAL), Cell Status (No Data), and a Help icon. The main area displays two tables:

Site						
Rec ID	User Site ID	Lat. Degrees	Lat. Minutes	Lat. Seconds	Lat. Direction	
N 15	jcb-98-003					

Site Area Overlap			
Seq	Area Type Name	Area Symbol	Area Name

- Click **F8** to open a new row, then position your cursor in the **Area Type** column.
- Click the **Choice** button.

Note: When the choice list appears, it indicates 0 choices. Choice lists display selections in your local database, in this case the NASIS_TUTORIAL database. Area Types are not owned by the tutorial database, so they do not appear when you first select the Choice List dialog.

- Click the **National** button, then highlight **Non-MLRA Soil Survey Area**.
- Click **Apply**.
- In the **Area Symbol** field, click **Choice** button again. This time you will see the list of Non-MLRA Soil Survey Areas in the tutorial database. Select **TD005**. The Site you created is now associated with area TD005.

Note: When creating overlaps for a real site it is recommended that overlaps be created for the following area types at a minimum—state or territory, county or parish, MLRA, and soil survey area. Others may be created as desired or needed.

The screenshot shows the NASIS - NASIS_TUTORIAL application window. The menu bar includes File, Edit, View, Options, and Help. The toolbar contains icons for Save, Cut, Copy, Paste, Table, Table, Sort, Object Status (Modified), Edit Setup (Default), Default Group (TUTORIAL), and Help. Below the toolbar, there are buttons for CLEAR, CANCEL, and a text field containing 'TD005'. To the right of the text field are buttons for Cell Status and CHOICE. The main area contains two tables. The first table, titled 'Site', has columns: Rec ID, User Site ID, Lat. Degrees, Lat. Minutes, Lat. Seconds, and Lat. Direction. The second table, titled 'Site Area Overlap', has columns: Seq, Area Type Name, Area Symbol, and Area Name. The data in the 'Site' table is: Rec ID N, User Site ID 15 jcb-98-003. The data in the 'Site Area Overlap' table is: Seq N, Area Type Name Non-MLRA Soil Survey Area, Area Symbol TD005, Area Name CANYON COUNTY, T.

Site					
Rec ID	User Site ID	Lat. Degrees	Lat. Minutes	Lat. Seconds	Lat. Direction
N	15 jcb-98-003				

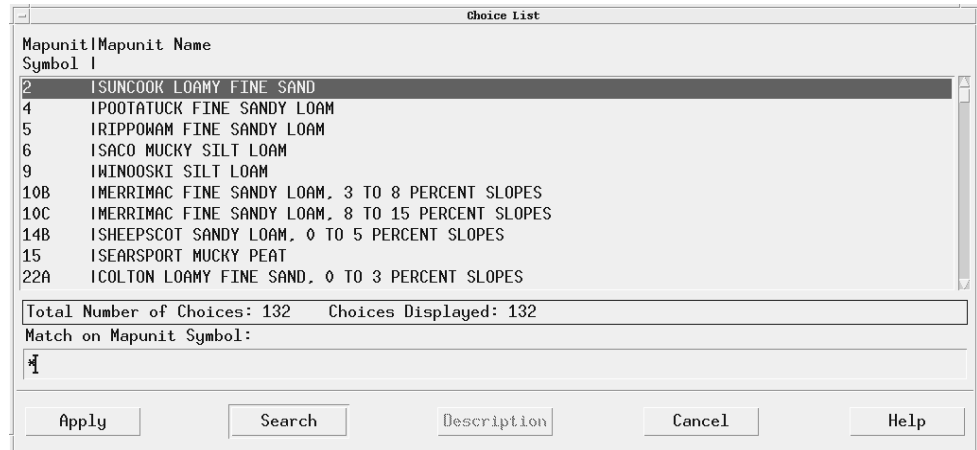
Site Area Overlap			
Seq	Area Type Name	Area Symbol	Area Name
N	Non-MLRA Soil Survey Area	TD005	CANYON COUNTY, T

Linking a Site to a Mapunit

- Starting with your cursor in the Non-MLRA Soil Survey Area row in the Site Area Overlap table, click the Down table button. The Site Mapunit Overlap table opens.
- Click **F8**, then position the cursor in the **Legend ID** column.
- Click the **Choice** button.

Note: If multiple legends are linked to the Area listed in the Site Area Overlap table, they will all be displayed in the choice list dialog.
- Highlight legend **1**.

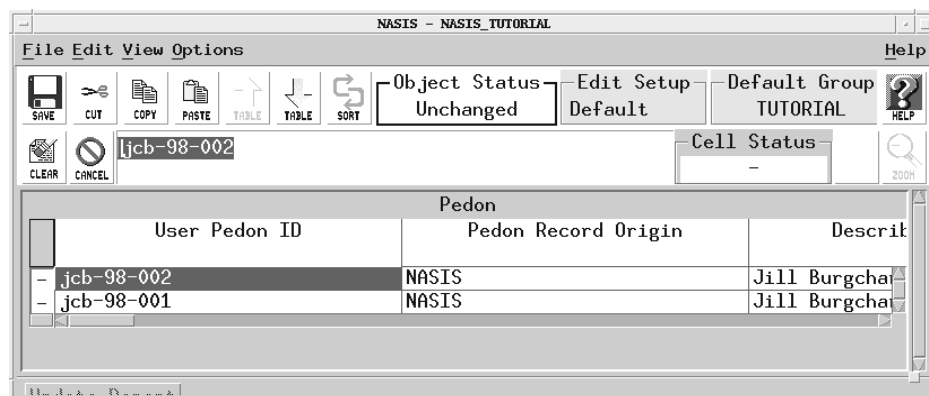
5. Click **Apply**.
6. Position the cursor in the **Mapunit Symbol** column.
7. Click the **Choice** button.
Note: There are 132 mapunit choices. Most user preferences are set to display fewer rows on choice lists. If none of the choices are displayed, you will have to do a search.
8. In the **Match on Mapunit Symbol** field type *, then click **Search** to list the mapunits for the specified legend.



9. Highlight Mapunit 4, **POOTATUCK FINE SANDY LOAM**.
10. Click **Apply**.
Note: You've now created the site mapunit overlap, which indicates that this site is located within this mapunit.
11. With your cursor in the **Site Mapunit Overlap** table, click **File, Load Related**.
12. Click **Mapunit** to load the related mapunit.

Adding a Pedon

1. On the **View** menu, select **Pedons, Pedon**.



Note: The Pedon table is displayed.

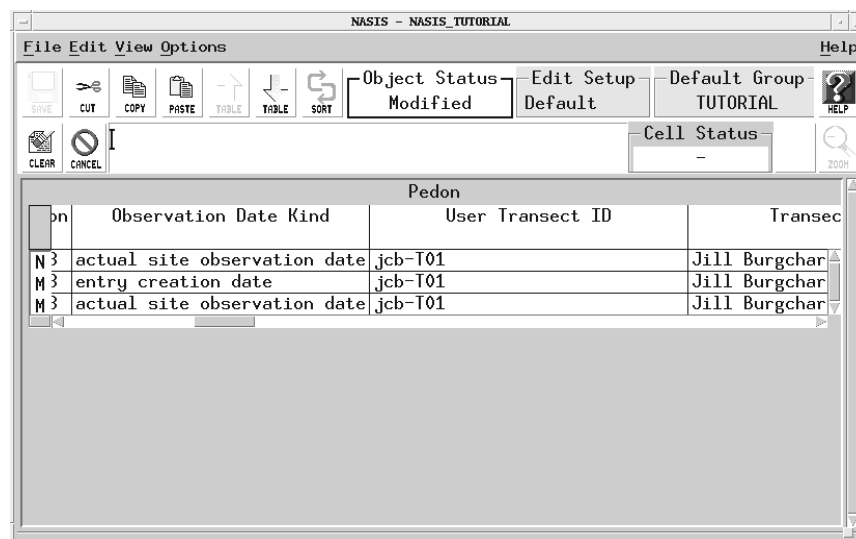
2. Click **F8** to open a row.

Note: The Pedon table contains information collected at the time a soil profile description is made. It has data that relates to the profile as a whole.

3. At the **User Site ID** column, click the **Choice** button, select User Site ID **jcb-98-003**, then click **Apply**.
4. At the **Site Observation ID** column, click the **Choice** button. Click **Apply**.

Note: One observation appears on the Choice List. When entering actual data, you may have several observations on your list. Most detail for observations is contained in child tables of the Site Observation table, not in the Observation table itself. So, it may be difficult to recognize the observation you want from the columns displayed on the Choice List. If you need to refer back to the Observation table, note the Rec ID, it is unique to a single observation for this site.

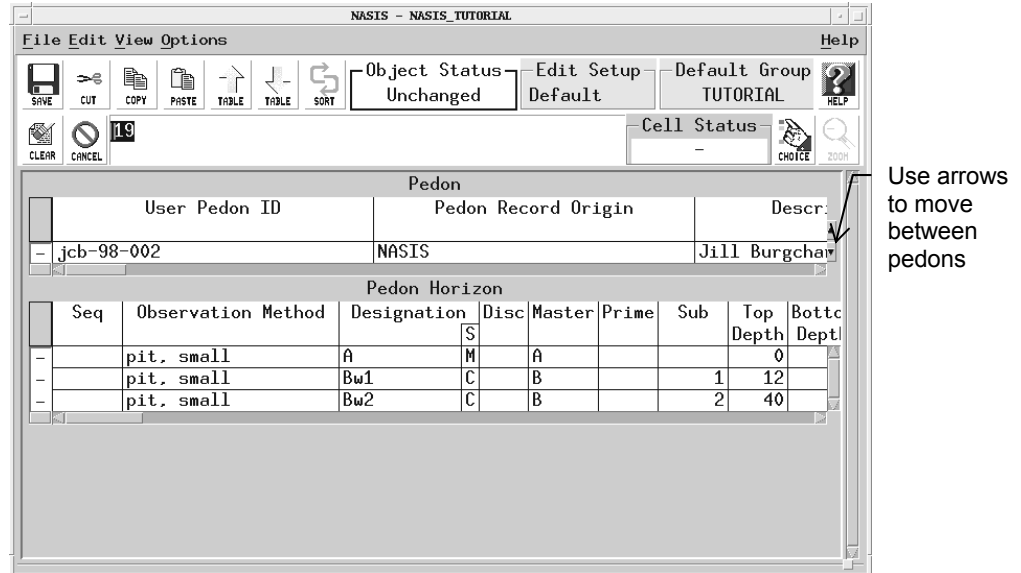
5. Complete the remaining columns of the Pedon table. In particular, identify the User Transect ID.
6. Click in the **User Transect ID** column.
7. Click the **Choice** button.
8. Select **jcb-T01**, then click **Apply**.



The screenshot shows the NASIS - NASIS_TUTORIAL application window. The menu bar includes File, Edit, View, Options, and Help. The toolbar contains icons for Save, Cut, Copy, Paste, Table, Table, Sort, Object Status, Edit Setup, Default Group, and a Help icon. The main window displays a table titled "Pedon". The table has four columns: Observation Date Kind, User Transect ID, and Transec. The data rows are as follows:

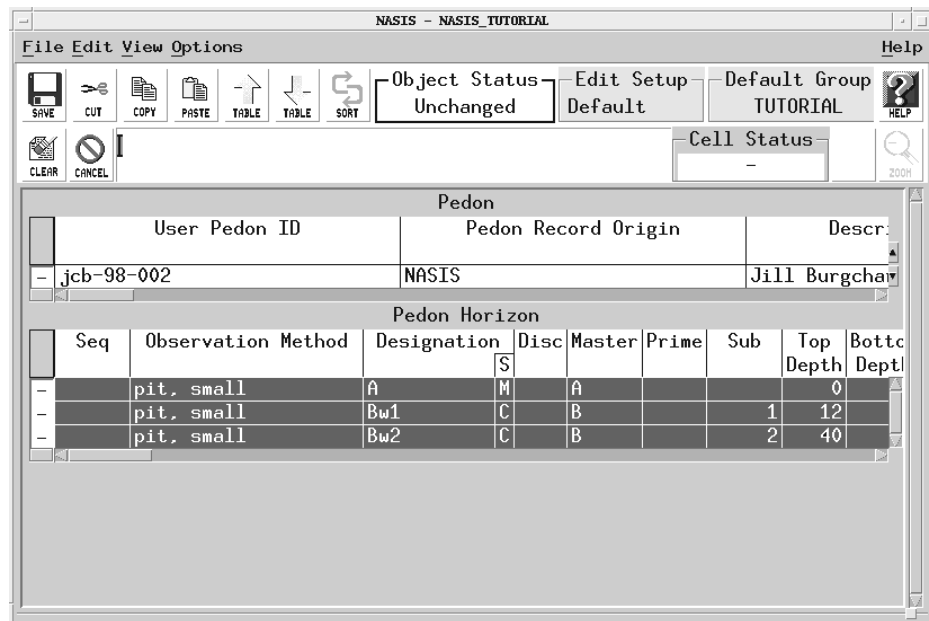
	Observation Date Kind	User Transect ID	Transec
N 3	actual site observation date	jcb-T01	Jill Burgchar
M 3	entry creation date	jcb-T01	Jill Burgchar
M 3	actual site observation date	jcb-T01	Jill Burgchar

9. Click **Down table**.



Note: The Pedon Horizon table is displayed.

10. Using the arrow on the Pedon table, locate **User Pedon ID jcb-98-002**.
11. Move your cursor to the **Pedon Horizon** table. The horizons for jcb-98-002 are similar to those for jcb-98-003, so you will copy them to your new Pedon Horizon and then edit them. Highlight all three rows, click **Copy**.



12. Use the arrow on the Pedon table to return to the pedon for User Pedon ID jcb-98-003.
13. Position your cursor in the Pedon Horizon table. Click **Paste**.
14. Position your cursor in the first row (A designation) of the Pedon Horizon table.
15. Modify some of the values shown in the **Disc**, **Master**, **Sub**, **Top Depth**, and **Bottom Depth** columns.

16. On the **View** menu, click **Pedon Horizons**, then click **Pedon Horizon Designation Suffix**.
17. Press **F8** to open a new row.

The screenshot shows the NASIS - NASIS_TUTORIAL software window. The menu bar includes File, Edit, View, Options, and Help. The toolbar contains icons for Save, Cut, Copy, Paste, Table, Table, Sort, Object Status Modified, Edit Setup Default, Default Group TUTORIAL, Cell Status, and a Help icon. The main window displays three tables:

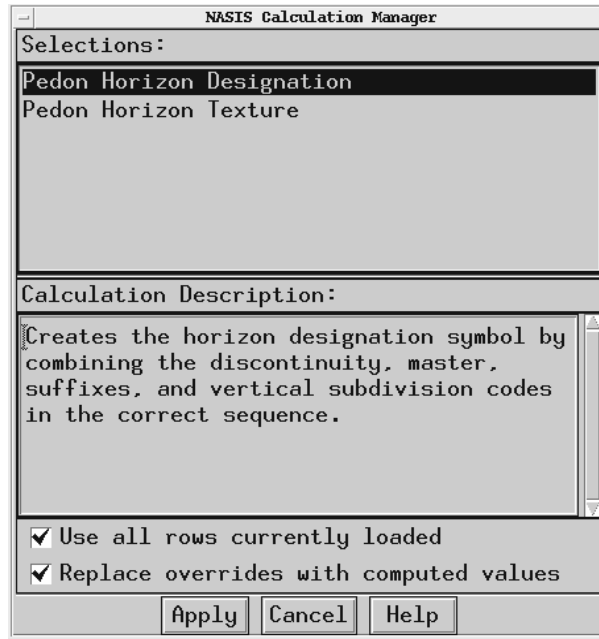
Pedon				
Site	Observation ID	Observation Date	Observation Date Kind	User Transec
N	21	09/22/1998	actual site observation date	

Pedon Horizon									
Seq	Observation Method	Designation	Disc	Master	Prime	Sub	Top Depth	Bottom Depth	
N	pit, small	A	S	M	A		0		

Pedon Horizon Designation Suffix		
Seq	Suffix	Rec ID
N	p	11

18. Enter **p** in the Suffix column (or select it from the choice list). This table must be completed before the Pedon Horizon Designation can be calculated.
19. Use the arrow on the Pedon Horizon table to display the **Bw1** and **Bw2** pedon horizon and pedon horizon suffix data. Just view these rows, no changes are necessary.
20. Position your cursor in the **Pedon Horizon** table.
21. On the **Options** menu, click **Calculate Data Elements**, then highlight **Pedon Horizon Designation**.
22. Check **Use all rows currently loaded** and **Replace overrides with computed values**, then click **Apply**. You should receive a message indicating that the calculation succeeded. Click **OK**.

Note: By selecting the Use all rows currently loaded option, the calculation will update or re-calculate the Horizon Designation for all horizons currently loaded in the selected set. If this option is not selected, only the row in which your cursor is positioned, or those that are highlighted, will be calculated.



Note: The Pedon Horizon table has two calculated data elements, the Pedon Horizon Designation and the Pedon Horizon Texture. As with other NASIS calculations, they must be run individually. The Pedon Horizon Designation is calculated based on the elements just entered. The Pedon Horizon Texture is calculated based on the next two tables.

23. With your cursor in the A horizon row in the Pedon Horizon table, select the **View** menu, click **Pedon Horizons**, then click **Pedon Horizon Texture**.
24. Because you copied your pedon horizons from jcb-98-002, **fsl** should already be selected in the **Texture** column. If it is not, either type it or select **fsl** from the choice list.
25. Click the **Down Table** button to open the Modifier table, then press **F8**. It is not necessary to enter a modifier, unless it is appropriate for the pedon. The calculation does not require an entry in this field.
26. In the Modifier column, select the **Choice** list, then highlight **gr**, and then click **Apply**.

The screenshot shows the NASIS - NASIS_TUTORIAL software interface. The main window displays the Pedon table with the following data:

Site	Observation ID	Observation Date	Observation Date Kind	User Transec
N	21	09/22/1998	actual site observation date	

Below the Pedon table, the Pedon Horizon table is displayed:

Seq	Observation Method	Designation	Disc	Master	Prime	Sub	Top Depth	Bot Depth
N	pit, small	A	M	A			0	

Below the Pedon Horizon table, the Pedon Horizon Texture table is displayed:

Seq	Texture	In Lieu	Rec ID
N	fsl		17

Below the Pedon Horizon Texture table, the Pedon Horizon Texture Modifier table is displayed:

Seq	Modifier	Rec ID
N	gr	1

27. Click **Up Table** twice to return to the Pedon Horizon table.
28. On the **Options** menu, select **Calculate data elements**. This time **choose Pedon Horizon Texture**, click **Use all rows currently loaded**, then click **Apply**. You should receive a message indicating that the calculation succeeded. Click **OK**. The calculation is run on all horizons loaded.
29. Click **Up table** to return to the Pedon table.
30. On the **Options** menu, select **Calculate data elements**. This time you will see only one choice, **Pedon Taxonomic Classification**. Click **Apply**. You should receive a message indicating that the calculation succeeded. Click **OK**. This only calculates the current pedon row.

Linking a Pedon to a Component

1. On the **View** menu, select **Legends**, then click **Correlation**.
2. Highlight **DMU 005004**.

The screenshot shows the NASIS - NASIS_TUTORIAL application window. It features a menu bar (File, Edit, View, Options, Help) and a toolbar with icons for Save, Cut, Copy, Paste, Table, Sort, Object Status, Edit Setup, Default Group, Cell Status, and a Help icon. Below the toolbar are three tables:

Legend		
Area Type Name	Area Symbol	Area Name
- Non-MLRA Soil Survey Area	TD005	CANYON COUNTY, TEST DA

Mapunit				
Seq	Mapunit Symbol	Mapunit Name	Kind	St
-	4	POOTATUCK FINE SANDY LOAM	consociation	corr

Correlation					
Seq	DMU ID	DMU Description	Rep DMU	Constituent Acres	Rec ID
-	2	005004	yes	1810	

3. On the **File** menu, select **Load Related**, then click **Data Mapunit**.
Note: A message indicates that one row was added to the Data Mapunit table. Click **OK**.
4. On the **View** menu, select **Components**, then click **Component**.
5. Click **POOTATUCK**.
6. On the **View** menu, select **Components**, then click **Component Pedon**.
7. Click **F8** to insert row.
8. At the User Pedon ID field, click the **Choice** button.

The screenshot shows the Choice List dialog box. It has a title bar 'Choice List' and a text field 'NASIS Site: NASIS_TUTORIAL' with buttons for 'Local' and 'National'. Below is a table of choices:

User Pedon ID	Describer's Name	Soil Name As Sampled	Pedon ID
jcb-98-001	Jill Burghardt	Pootatuck	13
jcb-98-002	Jill Burghardt	Occum	18
jcb-98-003	Jill Burghardt		112

Below the table, it says 'Total Number of Choices: 3' and 'Choices Displayed: 3'. There is a text field 'Match on User Pedon ID:' and a search bar. At the bottom are buttons for 'Apply', 'Search', 'Description', 'Cancel', and 'Help'.

9. Highlight the Pedon Site ID **jcb-98-003**, then click **Apply**. The pedon you just entered is now linked to this Pootatuck component. You can also designate it as the Rep Pedon in the Component Pedon table.

The screenshot shows the NASIS - NASIS_TUTORIAL window. The menu bar includes File, Edit, View, Options, and Help. The toolbar contains icons for Save, Cut, Copy, Paste, Table, Sort, Object Status, Edit Setup, Default Group, and Help. The main area displays three tables:

Data Mapunit				
DMU ID	DMU Description	Farm Class	HEL	
M	2 005004	1	not highly erodible	

Component				
Seq	Comp %		Component Name	Kind
	Low	RV	High	
-		85	POOTATUCK	S series

Component Pedon			
Seq	User Pedon ID	Describer's Name	
N	jcb-98-003	Jill Burghardt	

Defining a Site Association

1. On the **View** menu, select **Site Associations**, then click **Site Association**.

The screenshot shows the NASIS - NASIS_TUTORIAL window with the Site Association table displayed. The menu bar and toolbar are the same as in the previous screenshot. The main area displays the following table:

Site Association		
Rec ID	User Site Association ID	Site Association Site

2. Click **F8** to open a row. Enter a User Site Association ID of your choosing.
Note: By default, the program will assign NASIS_TUTORIAL as the Source Site Association Site and assign a Rec Id.
3. Click **Down Table**. Within the Site Association Site table you will select the individual sites that are members of this Site Association.
4. Click **F8** to open a new row.
5. At the **User Site ID** column, use the choice list to locate User Site Id **jcb-98-001**. Highlight it and click **Apply**.

6. Click **F8** to open a new row.
7. Repeat steps 4 and 5 to add Site ID **jcb-98-002**.

The screenshot shows the NASIS - NASIS_TUTORIAL window. The main area displays the 'Site Association' table. The table has columns: Rec ID, User Site Association ID, and Site Association Site. The first row shows Rec ID 'N', User Site Association ID '7', and Site Association Site 'NASIS_TUTORIAL'. Below this, there is a 'Site Association Site' section with a table showing the following data:

Seq	User Site ID	Site ID	Rec ID
N	jcb-98-002	13	7
N	jcb-98-001	3	6

8. Repeat steps 4 and 5 to add User Site ID **jcb-98-003**.
Note: When finished, three Site Ids should be associated with this Site Association.
9. You have now completed all of the tutorial lessons.

